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Japan Report

(FOUO 4/80)



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POLITICAL AND SOCIOLOGICAL

JCP CHAIRMAN SCORES JSP DECISION ON COALITION NEGOTIATIONS

OW121429 Tokyo JPS in English 0921 GMT 12 Jan 80 OW

[Text] Tokyo, Jan. 12 JPS--The Central Executive Committee of the Japan Socialist Party on January 10 officially decided to exclude the Japanese Communist Party from the negotiations on the coalition government in the 1980's. The reason for this decision says, "The Communist Party has retracted the concept of a 'better government', and this is contrary to the socialist position".

Kenji Miyamoto, presidium chairman of the JCP, 'veld a press conference in the Diet on January 10, and gave an answer to the press corps' questions on this matter. The gist of Miyamoto's answer follows:

"The essence of the Socialist Party's policy of excluding the Communist Party lies in its approach to the right-leaning anti-communist Kemei Party, even if it is well aware that the Komei Party favors the continuation of the Japan-U.S. security treaty and the self-defense forces.

"The Socialist Party is trying to make out that although it wants to discuss a government plan with the Communist Party, this is not possible because of the Communist Party's attitude. This is a deception, a play of words. When the Socialist Party proposed consultations in the Diet in November last year on the government plan of the opposition parties, only the Communist Party among the opposition parties took the position to accept the proposal. The JCP takes the position that in [words indistinct] case, the party will take part in all consultations for a provisional government. It is an outrageous slander that the Socialist Party is saying that the Communist Party 'has cancelled, in principle, a provisional government plan'.

"The JCP program calls for a 'better government'. (Chairman Miyamoto quotes part of the party program.) At the time of the crisis of the Tanaka government in 1974, the JCP called for an establishment of a provisional election control government, and at the time of the general election in 1976, proposed a provisional government. The resolution of the 14th party congress makes clear the party position on this matter. The Socialist Party argument is a mere trick, which can be seen through even by people who have little knowledge of the communist literatures".

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POLITICAL AND SOCIOLOGICAL

'JAPAN TIMES' COMMENTS ON JSP-KOMEITO POLICY ACCORD

OW160230 Tokyo THE JAPAN TIMES in English 16 Jan 80 p 12 OW

[Editorial: "Socialists Turn to the Center"]

[Text] The Japan Socialist Party (JSP) and Komeito managed late last week to conclude a basic policy agreement envisaging their joint participation in a coalition government. Coming after a similar pact signed last year-end between Komeito and the Democratic Socialist Party (DSP), the JSP-Komeito accord means a significant extension of the opposition alliance aimed at ending the Liberal-Democratic Party's (LDP) monopoly of government.

Potentially at least, the JSP-Komeito agreement is the more important of the two separate deals because it compelled the largest party of Japan's political left to accept some major policy changes. And these concern questions of an ideologically sensitive nature, like the desirability or non-desirability of communist partnership, the future status of the Japan-U.S. security treaty and the self-defense forces (SDF) and the more current problem of whether or not to support nuclear energy development projects.

The toughest issue faced by JSP and Komeito negotiators proved to be that of how to treat the Japan Communist Party (JCP) either with regard to the planning for or formation of an anti-LDP coalition. Firmly committed to an anti-JCP position, Komeito and the moderate DSP earlier rejected it as an alliance partner, explicitly stating they have serious misgivings about the Japanese communists' sincerity in adhering to the principles of political pluralism.

As it turned out, the socialists dropped their residual deference for the JCP as a comrade in the camp of Marxism-Leninism and agreed with Komeito to exclude, "Under the present circumstances," the JCP from the coalition talks. The socialists insist that the accord with Komeito is meant to cover the first half of the 1980's only and not to rule out communist partnership for good. The JSP-Komeito decision to keep the JCP from the joint drive to unseat the LDP government represents, nonetheless, a turnabout in the JSP's previous policy in favor of an all-embracing, opposition front.

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On the other major policy issues as well, it seems to be the socialists, rather than Komeito, that has conceded more to make a common program a reality. Instead of calling for an immediate and unilateral abrogation of the security treaty with the U.S., the JSP now joins the Komeito in regarding it as something they must live with for the foreseeable future. The JSP-Komeito policy agreement calls for the creation of an international environment of a kind that no longer requires the treaty. The two parties say, further, that they will seek its termination through diplomatic negotiations with the United States.

The JSP-Komeito agreement also says that the SDF may be retained for the time being under effective civilian control. It is, however, in favor of holding studies about a possible reorganization or reduction of the forces in the future when this becomes feasible. The JSP-Komeito common policy program is more reserved about the nuclear power projects than is the preceding Komeito-DSP statement of agreed policies. The socialists put off a decision on whether or not to support the construction of new atomic power plants.

It is entirely possible that the JSP made these concessions to Komeito entirely for tactical reasons. Even if the socialists offered to be less doctrinaire and take a few steps toward the center only for political expediency, it is equally true that they are now under powerful compulsion to demonstrate greater flexibility.

The general election of last October produced an impression of the continuing erosion in electoral support for the LDP. The opposition groups in alliance seem to have a better chance than at any time in the past to exceed the conservative party in parliamentary strength.

The October election, however, also reinforced the belief that the socialists are as much in trouble as are the liberal-democrats. They are likely to keep going down as long as they refuse to part with the faded slogans conceived as far back as in the 1950's and stop counting on friendly labor unions to deliver all the votes they need. Most opposition parties seem to stand to gain in the upper house election this summer, but the outlook for the socialists is anything but encouraging. They will surely benefit from vote-pooling arrangements with Komeito and perhaps with the DSP as well.

The JSP's turn toward the centrist parties and away from the Communist Party is a welcome development conducive to the better functioning of parliamentary democracy in this country. But that does not yet assure that we will have soon a credible, non-communist replacement for the LDP government.

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'JAPAN TIMES' ON RESULTS OF OHIRA'S OCEANIA VISIT

OW230603 Tokyo THE JAPAN TIMES in English 22 Jan 80 p 12 OW

[Editorial: "Future of Pacific Democracies"]

[Text] Australia and New Zealand certainly deserve more visits by Japanese prime ministers than once in five years and a half. It may be also true that Mr. Masayoshi Ohira could have usefully stayed there longer than he did last week. Stability and the growth of cooperation in the Asia-Pacific region commands premium value to our security at the turbulent opening of the 1980s. And clearly, any constructive endeavor to build a hopeful future for the region needs to be supported by a firm partnership between Japan and the two western Pacific democracies.

Though Mr. Ohira's Oceania visit lasted for less than five full days, he and his hosts have made most use of the occasion to emphasize their concerns about some recent developments endangering world peace, and the vital ties of economic interdependence binding Japan with Australia and New Zealand.

A statement issued last Wednesday by Prime Ministers Ohira and Fraser was particularly notable for the forthrightness with which they opposed the Soviet intervention in Afghanistan as well as the Iranian seizure of the U.S. Embassy and hostage-taking in Tehran. The Soviet action in Afghanistan was deplored as a direct violation of that country's sovereignty. Reasons cited by the Soviets for it were rejected "without legal and moral justification." The Japan-Australia statement asked Iran to free the hostages first of all, telling its authorities that the continued holding of the hostages "threatens the reasoned and civilized conduct of relations among states."

Stable supplies of coal, uranium and natural gas from Australia are a matter of critical importance to Japan today when much of its oil imports is dangerously destabilized by the political upheavals in the Middle East. Australia appreciated this Japanese anxiety and reaffirmed, in a most encouraging manner, its intention to meet the Japanese requirements.

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Prime Ministers Ohira, Fraser and Muldoon were also agreed in recognizing that the future relations between Japan and the two western Pacific democracies will eventually have to be anchored in a larger framework of cooperation, enveloping the entire Pacific community of nations. In this regard, Mr. Fraser's offer to step up researches on the concept of Pacific basin cooperation with an international symposium in Australia should be highly gratifying to Prime Minister Ohira, a declared advocate of the idea.

The Ohira visit did not seem to produce much progress, however, over some questions of immediate interest to the two host countries. Japan must attend seriously to these practical needs in Australia and New Zealand, because the three countries have a manifest and shared destiny ahead in working for the evolution of a peaceful Pacific community.

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'JAPAN TIMES' VIEWS SELF-DEFENSE FORCE SPY CASE

OW230607 Tokyo THE JAPAN TIMES in English 22 Jan 80 p 12 OW

[Editorial: "The GSDF Espionage Case"]

[Text] These days spies at high places are no longer shocking to most of us. Yet the arrest of a three-man team of agents working for the Soviet Union was news to the nation because the trio was headed by a former intelligence specialist in the Ground Self-Defense Force (GSDF) and his two junior colleagues are GSDF officers on active duty.

According to the Metropolitan Police Department (MPD), whose security officers uncovered the spy ring, ex-Major General Yukihisa Miyanaga has been offering classified information to his Soviet contacts in Tokyo probably since as far back as 1970.

Ever since the end of World War II, Japan has been labeled a paradise for spies because there is no anti-espionage law in this country. This does not mean, however, that there are no state secrets and other classified information that cannot be turned over to foreign governments without hurting our national interests.

This is the reason why there are laws that forbid such a transfer of information. In the case of the GSDF men in question, they are alleged to have violated the self-defense forces law, which makes it criminal for a member of the self-defense forces to "leak" secrets he came to possess in the course of his official duty. This prohibition applies to the personnel after their retirement as well, with a penalty of one year in prison for a violation.

As a matter of fact, such a prohibition is incorporated in the civil service law, which binds all civil servants in this regard.

The collection of intelligence is done by every country as a necessity to preserve and enhance its own national interests. We cannot blame Soviet or any other foreign intelligence officers operating in Japan for doing their job. But Japanese citizens cooperating with them must be punished by whatever relevant law affecting them.

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Since Japan has no military secrets of the kind that might radically alter the fate of mankind when they go into the wrong hands, what intelligence may have been turned over to Moscow probably has done little practical damage to our national interests.

Yet, the case of ex-Gen. Miyanaga bespeaks a definite laxity in the discipline of the self-defense forces. It also suggests that the particular instance uncovered this time may be only a small portion of a much larger picture that may or may not be yet revealed.

At least to prevent further erosion of popular confidence in our defense establishment, the current GSDF espionage case must be thoroughly probed. And in that process, means for preventing the recurrence of similar incidents may be found.

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OHIRA: PACIFIC BASIN CONCEPT COULD INCLUDE PRC, USSR, ROK

OW161445 Tokyo JIJI in English 1406 GMT 16 Jan 80 OW

[Excerpts] Canberra, 16 Jan (JIJI Press)--Japanese Prime Minister Masayoshi Ohira said Wednesday Japan would not refuse if China, the Soviet Union and South Korea hope to join his "Pacific basin cooperation concept."

He expressed the view in his second-round talks with Prime Minister Malcolm Fraser in the afternoon.

They agreed to hold the first private-level seminar at the Australian National University in Canberra this autumn as a first step for the materialization of the concept.

As for bilateral relations, they agreed on the establishment of a "working holiday system" proposed by Australia for interchange of youths of the two countries.

Concerning the "working holiday system" Australia had informally suggested earlier, Ohira promised to study it positively after receiving a formal proposal.

Under the system, youths of both nations would stay in each other's country for a long time, working as language teachers, for example, to deepen mutual understanding.

Referring to what is said to be the world's highest air fare between Tokyo and Sydney, Fraser proposed a drastic cut. Ohira answered he hopes a satisfactory conclusion will be reached at a meeting of civil aviation officials of the two countries scheduled for February.

As for cooperation in the resources and energy fields, they merely confirmed the contents of their joint press statement, which was issued after the talks, on account of a time limit. They will discuss concrete problems over breakfast Thursday.

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'JAPAN TIMES' COLUMNIST VIEWS 'LESSONS' FROM AFGHAN INCIDENT

OW150353 Tokyo THE JAPAN TIMES in English 13 Jan 80 p 1-4 OW

["Our Times" column by Masaru Ogawa: "Lessons From Afghan Rape"]

[Text] Japan's opposition political parties displayed rare unanimity with the governing Liberal-Democratic Party last week in condemning the Soviet military intervention in Afghanistan and calling for the immediate withdrawal of Moscow's sizable invasion forces.

This was only natural, for the Japanese consensus is that this naked aggression on a neighboring nation constitutes a grave and serious threat to world peace.

Even the Japan Communist Party, which had just mended fences with its Soviet comrades last month, found itself forced to break its silence and to join the public outcry.

But, the JCP, of course, did not forget to devote the major portion of its "protest" to a tirade against the United States' "intervention" in reprisals against the Soviet military action. It is resorting to that old trick of confusing the issue by conveniently forgetting which action came first.

Indeed, while the JCP had to bow to local public opinion in view of its political future--especially with this summer's House of Councillors' election in mind, the Soviet propaganda machine is operating full blast not only to "justify" its invasion but also to threaten nations contemplating participation in economic and political sanctions against the USSR.

Japan is naturally aware of its proximity to the Soviet Union and of the many problems which exist between the two countries, not the least of which are the Japanese northern territories, fisheries and Siberian development projects.

But these issues have not lessened Japan's feeling of shock, repulsion and outrage over the Soviet military attack on Afghanistan. While this reaction is common to all civilized nations, it should not be allowed to pass without

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putting this aggression into proper perspective for future reference and application so that this grave threat to global peace will not be repeated.

In the words of Foreign Minister Saburo Okita, Japan "must learn a lesson" from the Soviet intervention in Afghanistan by reassessing Tokyo-Moscow relations. He made this comment in noting that the Soviet aggression occurred despite the existence of an Afghan-Soviet treaty of friendship, good neighborliness and cooperation.

Okita did not elaborate further on what steps Japan would take in its reassessment of Soviet relations, but Moscow for the past several years has been proposing Tokyo's acceptance of a friendship and good neighbor pact to take the place of a peace treaty, which the two nations have been unable to agree upon since 1956.

The Afghan experience would suggest that it is dangerous to enter into a treaty with the Soviet Union, whatever it may be called which can be used as a pretext for invasion. There is also no safeguard in maintaining a pro-Soviet regime, unless it is willing to become a fawning puppet.

The Soviets have demonstrated, moreover, that they will deploy their own troops in a military vacuum where the nation's defense forces are completely disorganized and unlikely to resist effectively or to seek outside succor.

This means that Japan's self-defense forces should be kept in active preparedness to resist any aggressor at the initial stages at least in a holding action until outside assistance can be mobilized.

There is also need to activate the U.S.-Japan security treaty to a point where it will be judged a real deterrent against an attack. Japan must naturally take the initiative in this effort and not leave it up to the U.S. where the feeling persists that this nation is taking a "free ride" on its security.

The reassessment process should also include the question whether Japan's all-directional diplomacy of being the friend of all nations and the enemy of none leaves the nation with any real allies in times of its own crisis. This means it must not be afraid of taking a position on global issues and it must prove itself a true friend in need.

It is not enough, in this period of turbulence which has gripped the world, for Japan to emphasize its devotion to peace: It must join other nations in positive moves to stem aggression and to show that violence does not pay.

The current round of Soviet-instigated aggression has its beginning with the communist success in Vietnam in 1975. With war-weary U.S. and other democratic nations putting up only token opposition, Angola, Ethiopia and

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South Yemen came under Soviet influence. To this could be added last year's Vietnamese invasion and occupation of Cambodia. And now, it is Afghanistan.

Regrettably, recent events are proving that crime does pay off and that one successful aggression breeds another. There is need to call a halt. But this can only succeed through united efforts and the employment of all economic and political means, not excluding the boycott of the Moscow olympic games.

What is amazing at this stage is that the Japan Socialist Party and the Komeito, the nation's two opposition parties aspiring to replace the LDP with a coalition regime, agreed on a basic policy of gradually eliminating the U.S.-Japan security pact and eventually down-grading the self-defense forces.

One wonders whether they know what is taking place outside the peaceful Japanese "paradise." Were they only going through the motion and giving lip-service in their condemnation last week of the Soviet rape of Afghanistan? When will they wake up?

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'JAPAN TIMES' ON ECONOMIC TIES, IRAN, AFGHANISTAN

OW160639 Tokyo THE JAPAN TIMES in English 15 Jan 80 p 5 OW

[Commentary by Kentaro Koshiba: "Japan Economic Ties at Stake"]

[Text] The Iranian and Afghan crises provide disturbing examples of how Japan's bilateral economic cooperation can be adversely affected by external developments that are beyond its control.

In Iran, the petrochemical project in which the Japanese Government also has a stake is deadlocked. The prospects for its early resumption are clouded by the continuing Iran-U.S. confrontation and moves by the U.S. and its allies, including Japan to apply economic sanctions.

That project, involving an estimated cost of about yen 700 billion, had been stalled by the Islamic revolution. But the government's decision to provide financial backing, reached in late 1979, saved it from collapse.

The situation suddenly changed. However, after the seizure of the American Embassy in Tehran, where radical Iranian students took some 50 Americans hostage.

Japan protested against the action in strong terms, though somewhat belatedly, and expressed support for the U.S. attempt to impose economic sanctions.

There was no other alternative for Japan but to go along with the U.S. Japan's choice was extremely narrow, and it still is--maintaining its trade and economic ties with Iran as much as possible while keeping in step with Western countries.

So far no serious disruptions have reportedly occurred in those relations. On the contrary, Japan has clinched a direct oil deal to import 520,000 barrels a day from Iran, or 14 percent more than this country contracted to buy last year.

But this is no ground for self-complacency. Iran's revolutionary government apparently reserves the right to take "retaliatory" action if and when the U.S. and its friends go ahead and impose tough sanctions.

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Tehran has already darkly warned, in fact, that Iran would cut off oil exports to countries that joined in the U.S.-proposed sanctions. The fear is that, in a worsening climate of Japan-Iran relations, the resumption of the petrochemical project, the symbol of economic cooperation between the two nations, might be further delayed.

Meanwhile, the prospects for Japan-Soviet economic cooperation are clouded by the Afghan crisis. The U.S., as in the case of the Iran crisis, is trying to rally its allies behind its moves to "punish" Russia by economic means.

Japan is not in a position of being able to take any strong punitive action against the Russians any more than it can against the Iranians. Among the steps that have been suggested so far are the following:

- --Holding up negotiations on new development projects in Siberia, such as those to produce pulp and lumber and construct port facilities.
- --Suspending new credits and loans to help finance those projects, estimated at about \$1.2 billion.
- --Restricting the sale of sensitive high-technology products, such as computers, that are subject to the approval of the Coordinating Committee for Export to Communist Countries (COCOM).

At the moment, the government is taking a "wait and see" attitude. But sooner or later it is likely to be compelled to make clear what it intends to do or not to do, by way of protesting against the Soviet military intervention in Afghanistan.

It is the hope of the government as well as the business community that Siberian development projects, including several existing ones to produce oil, natural gas and coal, will remain intact.

Japan has nothing to gain by interfering with those projects. As is the case with Iran, any strong protest move on Japan's part is likely to invite some retaliatory measures from Russia, including a ban on Japanese fighing in Soviet waters.

Japanese participation in development projects in Iran and the Soviet Union serve as a catalyst for economic cooperation between Japan and these countries. And such cooperation help to promote overall bilateral relations.

The basic relationship that exists here is that of economic interdependence. Russia, like Iran, is an important exporter of natural resources to Japan, while Japan is a major supplier of technology.

In 1978, the Soviets exported \$1.4 billion worth of goods to this country, of which 65 percent consisted of raw materials (e.g. lumber) and energy

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(coal and fuel oil). In the same year, Japan sold \$2.5 billion worth, mostly in chemical and heavy-industry goods.

The philosophy that supports this relationship, at least from the Japanese point of view, is that politics and economics should be separated. The same principle applies to Japan-Iran relations.

But the Iranian and Afghan crises put this principle of "seikei bunri" (separating politics from economics) to a severe test. Both make it clear that bilateral economic cooperation can be hamstrung by political decisions forced by external events.

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FINANCE MINISTRY: 'BUREAUCRATIC PARADISE', OFFICIALS DEFEND THEIR INTERESTS

Tokyo ASAHI JANARU in Japanese 26 Oct 79 pp 100-104

[Text] Mutual Entertaining Inherent Among Japanese

Astonishing facts concerning the "bureaucratic paradise" have been brought to light in successive exposes, beginning with the mismanagement of accounts within the Japan Railway Construction Corporation. Especially at this time when the reconstruction of national finance is demanded, the existence of "dinner party politics" whereby bureaucrats entertain each other with the taxpayer's money, and the fact that the Finance Ministry stands at the apex of such conduct, were totally incomprehensible from the standpoint of the people who face imminent tax increases. The major defeat of the Liberal Democratic Party in the recent Lower House elections—known as the "tax increase elections" and led by Prime Minister Ohira, who had stated during part of the campaign that "a tax increase is inevitable"—cannot be separated from these exposes. Also, the soil in which "dinner party politics" was nurtured is not peculiar to the Kasumigaseki government district of Tokyo. It is indeed endemic throughout Japan.

About 2 months ago, an article in the British magazine EURO MONEY, entitled "Finance Ministry Bureuacrats--The Most Powerful Group in Japan," was translated by the Japanese Ministry of Finance and distributed internally as ministry data. It is an extremely interesting article resulting from 6 weeks of research conducted by the magazine's correspondent in Tokyo, and it introduces the makeup of the Japanese Government as well as various aspects of the Finance Ministry bureaucrats. The following is an excerpt of the article.

"It Is Painful To Be Held Up for Exposure"

(After dwelling on the popularity of young and elite Finance Ministry bureaucrats as prospective bridegrooms,) the article points out that a marriage with a Finance Ministry bureaucrat does not necessarily become a happy one. By the time the many young daughters with prominent connections realize that the Finance Ministry bureaucrat is overworked and underpaid, it is too late. They realize the difficulty of adjusting from the spacious

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and traditional homes where they were brought up to the narrow and dilapidated government housing where the majority of the young bureaucrats must live. Among such wives are some who suspect that the husband's late return home is not due to budget drafting, but to carousing in the teachouses.

The number of such wives has undoubtedly increased with the recent expose of "dinner party politics" among Finance Ministry bureaucrats.

As investigations by the Board of Audit into the Japan Railway Construction Corporation progressed, reports began to filter out that "Finance Ministry officials are demanding dinner party entertainment" or that "they are passing dinner checks on to their clients for payment." As a result, late last month Administrative Vice Minister Nagaoka of the Finance Ministry ordered Chief of Secretariat Matsushita to conduct "a strict investigation." So far, however, while taking the position that "demanding dinner parties and passing on dinner checks are unconscionable acts," the official posture concerning the so-called "dinner party politics" has been that "it does not deviate from social common sense."

If so, how does the Finance Ministry itself construe the "entertainment of Finance Ministry bureaucrats"? The following opinions are those of the Budget Bureau, which is at the focal point of the controversy. Mr A (in his 40's) is a budget officer. Mr B (in his 30's) is an assistant budget officer. Both are Tokyo University graduates and career bureaucrats (elites who passed the higher civil service examinations to join the ministry). The following report was prepared from recollections of conversation at an inexpensive bar where the bureaucrats were entertained with the meager pocket money of the reporter.

(Mr A) Concerning the current exposure of "entertaining Finance Ministry bureaucrats," my frank reaction at the moment is that it is "painful." In theory, I can only admit that "you are right. We don't in the least consider it a good thing." Moreover, if we were to try to refute it, we would be immediately subjected to a sound drubbing. Therefore, we can only bear it for the moment. However, inwardly, we are left with mixed feelings. That is, we would like you to understand that we do not at all accept dinner invitations from other ministries and agencies simply for the sake of drinking and having a good time. We accept the invitations because we believe that "in the present makeup of Japanese society, a certain amount of lubrication is indispensible." Since we do not go along with the practice as something "inevitable," we feel it "painful" when we are unilaterally attacked as the "root of various evils."

(Mr B) In a word, it is truly "painful." The work in the Budget Bureau is extremely hard work, unparalleled elsewhere. Especially during the budget drafting season from September until the end of the year, we return home in the middle of the night and often sleep at the office. There are often no Sundays or holidays off for us. Of course, we would like to go home early and eat a home-cooked meal, but when we are asked. "How about

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having dinner with us tonight?" we go along. The assistant budget officer and other younger staffers return to the office after the dinner and continue their work. Despite the current furor over the "entertaining of Finance Ministry bureaucrats," we would probably accept an invitation tonight if there were to be one.

(Mr A) It is not so enjoyable to drink and eat with officials of other ministries and agencies with whom we are not intimate friends. The reason the custom has prevailed is that, if I were to reject a long custom, I would be branded as an eccentric. I would not mind it if I were to be considered as such merely within our own ministry. If the opposite ministry or agency were to think so, work on the budget would not proceed smoothly. Additionally, in Japanese society work can be conducted smoothly only after the participants have had some drinks together at dinner and are able to mutually relax.

Japanese Custom To Reveal True Intentions "Over Dinner"

(Mr B) That is true. During the daytime when we are shown the budget drafts across the desk at the office, our clients are accompanied by their aides, and their explanations tend to center entirely on the "importance of this or that phase of the budget." It is inevitably confined to rhetoric on the basic principles. As for discussion of the substance, such as "Item A is requested as a matter of routine, but Item B is an absolute necessity," this will only be brought out in the evening over dinner. For example, we would never discuss with you at the office, during the daytime, what we are discussing with you now. I have absolutely no confidence that I can do justice to the assessment of a budget draft merely on the basis of daytime explanations.

(Mr A) We would only be happy if our work could be accomplished on the basis of daytime negotiations at the office. It is perhaps possible in a foreign country, but unfortunately it is still impossible in Japan. For the work to be conducted smoothly, there are certain essentials which transcend rhetoric. Even we in the Kasumigaseki government district cannot be isolated from the Japanese custom of partying among businessmen and politicians, referred to as the "expense account paradise" or "expense account elites." To disregard this fact and to punish public expense entertraining is to be unrealistic and pretend to be a friend of justice. Nonetheless, the Finance Ministry cannot air this fact openly, since it would inevitably become the target of a concentrated attack. Therefore, we can only say, "It is painful to be subjected to such criticism."

(Mr B) It could of course be pointed out that the issue concerning the "entertaining of Finance Ministry bureaucrats" lies in the use of the tax-payer's money, unlike entertaining among the business community. However, from the standpoint of the total 38,600 billion yen budget, it is a mere pittance. If society can function smoothly because of it, it should be overlooked. The issue should rather be, for instance, the waste of the

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taxpayer's money by the Mitsui Group which started the Iran petrochemical industry project for profit and could not finish it, necessitating the national treasuty to come forward with 20 billion yen. Moreover, although there have been various criticisms, such as "Finance Ministry officials demand entertainment" or "bureaucrats are angered when taxis are sent instead of limousines to pick them up" or "the officials ask for geishas," can you imagine either Mr Nagaoka (administrative vice minister and former Budget Bureau chief) or Mr Tanaka (present Budget Bureau chief) making such demands?

(Mr A) After all, the Finance Ministry consists of human beings, and there may have been some individuals throughout its long history who made such senseless remarks. However, they were exceptions and should not be condoned. In considering the present members of the Budget Bureau, I am certain there is no one who would be so foolish. On the other hand, I somehow feel that some members of the other ministries and agencies (who do the entertaining) might be a bit oversensitive and overeager to please.

(Mr B) In any case, the recent uproar will probably leave us with a residue of distaste for a long time. What we fear most is reaction such as "the nerve of those fellows at the Finance Ministry to say such things after making us squander public funds" at this time when we firmly believe that financial reconstruction is our prime task for the sake of Japan's economy. We must ask for a tax increase while making strict assessments of budget requests. There is a big difference between money required for financial reconstruction and public funds used for entertaining.

Of course, it is easy to refute all this, and some may have a sense of repulsion towards the Finance Ministry officials for throwing up their hands while admitting that "we would be subjected to a barrage of criticism if we were to argue our point openly."

Nonetheless, the problem of "entertaining at public expense" which is rooted deeply in the soil of the Japanese climate cannot be dismissed. It is a society where a wide discrepancy exists between principle and substance, and where the influence of "acquaintance" is strong. Even on the ostensibly businesslike scene of budget negotiations, it is a sentimental society wherein the human relations between the requesting parties and the assessors are subtly reflected. Entertaining not only among government officials, but also of politicians and government officials by private business, is a well known fact. It sometimes results in criminal cases, but it is a recognized and common practice if it is conducted for purposes of "getting acquainted" or "holding heart-to-heart talks."

That is to say, the Finance Ministry bureaucrats are not the only objects of entertaining at public expense. As the economy and society become increasingly complex, administrative problems faced by the ministries and agencies also increase. This has resulted in a closely interwoven system

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of "dinner party politics," whereby Office A entertains Office B, Office B entertains Office C and Office C entertains Office A. Naturally a conspicuously large number of Finance Ministry bureaucrats, centering in the Budget Bureau and Finance Bureau which hold the powerful authority of assessing budget requests and financial investment plans, tend to be the objects of such entertaining.

Japan is a nation where the salaried worker--living in a "rabbit hutch"-is lavishly entertained at an outrageously expensive cabaret on the Ginza
or a high-class teahouse in the Akasaka district or is out on the golf
course on a workday at public expense. The bureaucrats of the Kasumigaseki
government district are also deeply immersed in this custom, but they are
not the only sinners.

Rhetoric of Entertainers: "To Build Effective Relations"

Now for the explanation of "those who entertain Finance Ministry bureaucrats." The speaker is a veteran section chief (in his 40's) of a comparatively small central government agency. "We can well understand the feelings of the Finance Ministry bureaucrat who complained that the criticism was 'painful.' Since we are a small agency, we hold three main dinner parties a year at which we include budget officers: When the budget is passed by the Diet, during the summer season of personnel shifts, and in September when the budget requests are submitted. However, each budget officer or assistant budget officer is in charge of several government agencies and, since each bureau in the larger ministries does its own entertaining, it must be quite a burden on those who are entertained.

"Meanwhile, it is a rather delicate matter concerning whether or not the Finance Ministry bureaucrats ever demand such entertainment. At least at our agency, there are none received from career budget officers or assistant budget officers. That is probably because they have wide jurisdictions, are entertained frequently and do not wish to damage their careers. It is different in the case of the lower-echelon, non-career officers who have not passed the higher civil service examinations. Of course, they do not make open demands, such as 'How about a party tonight?' But we do get the message somehow through telepathic communication.

"We sense their intention and invite them. The venue for such parties is a grade lower in class than that used for the budget officer class, and taxis are used instead of limousines. Assuming that non-career officers would be more at ease with other non-career officers, section chiefs from our side do not attend.

"It could be said that entertaining by us is, in effect, related to approval of our budget requests. However, it does not mean we expect immediate results, such as going easy on assessments or increasing our budget allocations. It could be said it is for the sake of better relations, or in the typically Japanese manner of mutual greetings during the midyear and

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yearend sessions. Once we have exchanged cups of 'sake' together, there will be a difference in a single telephone call. It is for this reason that we are also entertained by other ministries and agencies.

"The worst thing possible from the standpoint of the entertaining side is to offend the feelings of those who are entertained. That would defeat the whole purpose of entertaining. Therefore, when entertaining Finance Ministry officials, we exchange information with agencies in similar situations concerning the venues and levels of entertaining. Especially when a certain budget officer goes on an inspection tour to the provinces, the provincial offices are in a dither. Since not only our provincial office, but also the provincial offices of all the ministries or agencies under the jurisdiction of the budget officer are involved, they take turns in entertaining him. They are sensitive to each other and compete in their treating.

As a result, the custom tends to escalate every year. The section chief must prove his ability in raising such funds. In a small office, even diverting convention funds does not suffice, and pains are taken to raise money from office expenses and miscellaneous funds. A bona-fide restaurant charges about 50,000 yen per person and taxi fares nowadays are nothing to scoff at. Since our office is small, and we are within surveillance distance from other offices, we do not have bogus trips. But there are probably offices which fake trips in order to create funds."

"Public Expense Paradise" Is Outcome of Japan's Social Fellowship

The distortion of social fellowship among the Japanese has cast its shadow in the form of dinner party politics--known also as a "public expense paradise." It is a fact that, today, the midyear and yearend exchange of gifts, intended to come out of one's own pocket money, are paid with office funds. As a result, the expenses of a public employee for ceremonial occasions (marriages, funerals, etc.), especially those of a senior bureaucrat, tend to accelerate in proportion to his rise in position.

The money spent towards congratulatory and condolence gifts for not only immediate subordinates, but also for former subordinates and job-related acquaintances, probably exceed several tens of thousands of yen per month in the cadre class. Of course, it varies according to the extent of such relationships, but a general rule-of-thumb is 10,000 yen for a bureau chief and 5,000 yen for section chiefs and under. It is utterly impossible for one to pay out of his own pocket. One can easily imagine funds being squeezed out of faked trips and allocated as expense funds for cadre officers.

Also, an example of the discrepancy between principle and substance may be seen in the expose of "bogus awards" among the semigovernment special corporations, including the Japan Railway Construction Corporation. The Finance Ministry, which oversees the awards funds of special corporations,

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stipulates under its wage regulations that such awards "must be in accordance with regulations for government employees." Therefore, awards must agree with those for national government employees. On the other hand, special corporations employ civilian management methods, unlike government agencies, and their employees are thus given the three labor (contracting) rights.

In other words, a peculiar situation exists in the fact that, although the labor union which is presumably protected by the three labor rights may reach an agreement on awards independently as a result of labor-management negotiations, absolutely no funds would be allocated for the awards in the budget if the amount exceeds that for national government employees. Actually, the problem has been solved by raising the difference through bogus trips and through gaps between personnel quotas and actual number of personnel.

Of course, such improper methods should not be permitted. But since the problem has risen from the present discrepancy in the system based on principle (rather than substance), the government is painfully grappling for a solution. Equating awards to those for government employees would mean depriving corporate employees of the three labor rights. It would also mean confrontation with the formidable Council of Governmental Special Corporation Employees Unions and the Japan Council of National and Local Government Workers Unions, which the government has no confidence in overcoming. On the other hand, to leave the matter to independent negotiation would give rise to the difficult problem of incorporating the demands in the budget draft. If they are included in the requests for reserve funds, they would become the starting point for labor-management negotiations and bring on additional requests for increases. So far, the government has found no solution.

In any case, while not a few bureaucrats would probably want to feeload on drinking and carousing, there is no doubt that dinner party politics is rooted to a great extent in the typical Japanese ambiguity. Therefore, no solution can be reached by merely probing into bogus trips and other surfacing problems. The top administrators of the Finance Ministry, who are now pushing a "severe investigation," state that if insidious cases of "passing dinner checks" and "demands for entertainment" are found, "proper measures will be considered." However, they say at the same time, "It is difficult to determine to what extent it is based on social common sense. For example, when a newly appointed administrator arrives on the job and is invited to one of these parties, it probably could be considered as "social common sense."

As long as the concept of "social common sense" prevails, bureaucrats may refrain temporarily from dinner party politics, but they will inevitably resume the practice at an even greater pace. There is only one way to eradicate the practice. That is, the government itself, or the Finance Ministry, which is the most frequently entertained, must declare that

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"all evening entertaining must cease" and implement it. The government offices themselves must take the initiative in putting an end to the pernicious Japanese custom.

Amidst the furor over the cozy relationship between politicians and the business community, Toshio Doko, "prime minister of the financial world," declared on assuming the post of chairman of the Federation of Economic Organizations (Keidanren) that he would "refuse all dinner party invitations," and has actually lived up to his word. He has pledged to "enter from the front door in broad daylight if there is any business to perform" and asks, "How can any important issue be discussed at all at a dinner party?"

However, some persons feel that the Doko formula would not be practiced outside the Keidanren, while some inside the Keidanren complain that "it is extremely difficult to conduct business this way." It is possible that, when Chairman Doko retires, things will revert to former ways after a single period of restraint. In Japan, to abolish the practice is probably comparable to "waiting 100 years for the Yellow River to flow clear."

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MILITARY

'JAPAN TIMES' VIEWS GRAVITY OF SELF-DEFENSE FORCE SPY CASE

OW210147 Tokyo THE JAPAN TIMES in English 20 Jan 80 p 2 OW

[Commentary by Masanori Tabata: "Spy Case a Blow to Defense Planners---How Much Did Soviets Learn of Hokkaido Troops?"]

[Text] The unfolding espionage case that saw the arrest of a retired top intelligence officer of the ground self-defense force (GSDF) and two active duty junior GSDF intelligence officers Friday on suspicion of passing classified information to the Soviets has dealt a heavy blow to the nation's defense planners and the moral of the all-volunteer self-defense forces (SDF).

At the same time, the major espionage case has aroused the specter of spy hunt mania, a reminiscence of the xenophobic prewar totalitarianism, underscored by the loud call for revived enactment of an antiespionage law, like the official secrets act of Britain. The government, however, so far maintains a relatively cautious attitude on this score.

A former ranking GSDF intelligence officer, who had worked under Yukihisa Miyanaga, 58, the former major general who allegedly organized a spy ring inside the GSDF's intelligence unit specializing in evaluation of Soviet military intelligence information, was interviewed by the JAPAN TIMES. The exintelligence officer said the most serious question is whether information on details of the deployment of the frontline GSDF troops in Hokkaido, the northernmost of the four major islands of Japan facing the Soviet Union, had been passed to the Soviets.

Miyanaga's three-man spy ring had been allegedly controlled by Col. Yuri Kozlov, the military and air attache at the Soviet Embassy in Tokyo who is believed to be a member of the Soviet military intelligence directorate known as the GRU. Col. Kozlov, accompanied by his wife, hurriedly left Tokyo for home Saturday, after declining a request from the Tokyo metropolitan police department for an interview by citing diplomatic immunity.

The chief of ground staff, Gen. Shigeto Nagano, told the press Friday night that he believes Miyanaga, who retired in 1974, has had no access to the

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latest top secrets concerning the operational plans of the $\ensuremath{\mathsf{GSDF}}$ and the latest weapons systems.

But the source said since Miyanaga served as head of the G-2, or intelligence section of the staff, of the northern army headquarters in Hokkaido between 1967 and 1969, he was in a position to know almost everything about the defense plans and details of deployment of the troops and classified data concerning characteristics and performance of individual weapons, ranging from rifles to tanks and artillery pieces, although information on them is some 10 years old by now.

Weaponry may have become obsolete in the past decade but information on other subject matters is still valuable and dangerous in the hands of a hostile foreign power as these other matters are virtually unchanged, the source said.

The ex-intelligence officer described his former Russian-speaking boss as an able G-2 (intelligence) man. "By nature, he is a kind of man who is outspoken in his likes and dislikes, although he was usually very quiet and quite understandable as long as intelligence work is concerned. For me, he was both an able colleague and trustworthy boss. But he was hardly called a sociable chap by the others," he quipped.

He also said that one of Miyanaga's accomplices, 1st Lt. Eiichi Kashii, 45, was in fact his subordinate when he was in active service. Kashii was at one time assigned to a section of the intelligence unit dealing with Korean military affairs, he said.

"If my memory serves me correctly, I didn't think he was an excellent G-2 man. But because he was such a type of 'handy' man, I let him transfer to an administrative section of the intelligence unit where no vital information concerning the domestic affairs is dealt with," he said.

The ex-intelligence officer said that the magnitude of the damage inflicted on Japan's armed forces is yet to be determined. But the sensational case will bring forth adverse effects on the relationship between the SDF intelligence service and its U.S. counterpart or other American intelligence services, because the disclosure of the "turncoats" has considerably undermined the credibility of the internal security arrangement of the Japanese armed forces, he said.

[OW210149] Besides, strict disciplinary measures will be taken and a major reshuffle of the SDF intelligence apparatus is almost imminent under the circumstances. That, in turn, will strongly affect the morale of the G-2 boys, not to mention the members of the other branches of the SDF. Able intelligence analysts are hard to come by, and their training requires many years so that it is not advisable to radically realign the intelligence setup," he said.

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A former veteran field agent of the public security investigation agency of the Ministry of Justice, which maintains domestic surveillance over both Japanese and foreign subversives and other socially undesirable elements or groups, said that it would be safe for the public security authorities to assume there are more "low-grade informers" working for the Soviets inside the GSDF and the two other branches of the SDF, namely the air and maritime self-defense forces.

"I would say that the people at the defense agency and the SDF bases have been far from security conscious. They are very sloppy and insensitive in handling classified materials from the viewpoint of a professional counterespionage agent."

He said that unless there is a change in the unwarranted optimism of the Japanese people, who lack awareness of the evil intentions of foreign powers, the nation will continuously provide foreign intelligence services with easy access to classified information on its security.

"Japan has been, and will be, known to both professional and amateur operatives alike as 'heaven for spies'," he said.

The Miyanaga affair is said to be the most successful case of Soviet espionage operation in Japan in more than 20 years. This is because the three "turncoats" were all trained military intelligence officers, whose loyalty to the apparatus to the SDF is usually considered to be quite strong.

In the case of the past spy scandals involving either of the two Soviet intelligence services--the Committee for State Security known as the KGB, and the GRU--the locally-recruited agents were all amateurs trained by the local control.

It is yet to be known whether Miyanaga betrayed the Japanese military secrets to the Soviets voluntarily or if he was blackmailed into doing so. It has been known, however, that he was captured by the Russians as a prisoner of war at the end of World War II and detained for some time in one of the Siberian camps where systematic brainwashing was generally conducted on Japanese POWs.

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ECONOMIC

STEEL COMPANIES SEE FUTURE IN OVERSEAS PROJECTS

Tokyo BUSINESS JAPAN in English Jan 80 pp 73, 75

[Article by Tsunesada Someya, editorial writer, Nihon Kogyo Shimbun]

[Text]

JAPAN'S steel industry is enjoying a favorable demand for steel products in both the domestic and overseas markets. Benefitting from the rise in sales prices, steel companies reported the highest sales and earnings in history at their interim accounting in September 1979. They have also been cooperating internationally through participation in such giant projects as the construction of the Tubaron steel mill in Brazil and the Shanghai Paoshun steel mill in China.

Many pending problems, however, confront them, such as the rising costs stemming from the hike in crude oil prices, the need to raise the prices of steel materials to cope with the oil price markups, and the sharp increase in imports of steel materials from various countries. The steel companies face the difficult situation of whether they can surmount the long-term slowdown and establish the foundation for stable growth.

As a result of the oil crisis in 1973, the Japanese steel industry was plunged into a serious recession with a sharp fall in demand and sales prices. For instance, output of blister steel which totaled 120.010 million tons in fiscal 1973 fell to 164,000 million tons in 1977, a steep drop of 16%. As a result, the steel companies went substantially into the red and fears of bankruptcy emerged.

In fiscal 1978, however, the steel companies' sales and earnings started to improve as a result of their efforts

to rationalize operations and because of the improvement in the business environment. Output of crude steel in fiscal 1978 rose to 105,050 million tons and is being produced this fiscal year at a pace that should raise it to 110,000 million tons. This will be the third highest output in history after fiscal 1974, an indication that production is recovering very favorably.

Exports have also been picking up during this period. In fiscal 1978, they totaled 31,280,000 tons in volume, a decline of 8.7% from the preceding fiscal year, but in terms of value, higher by 18.9%, amounting to US-513,000 million. It surpassed the previous highest figure of USS12,500 million recorded in fiscal 1974. The record was achieved despite the decline in export volume because the steel companies instituted price hikes to improve their profit margins. The average price of USS145 per ton in fiscal 1978 was \$96 higher than in the preceding year.

On the domestic market, the manufacturers have left prices unchanged for the past three years. As a result of the improvement in supply and demand, however a slight hike in prices of steel delivered directly to both users and wholesalers is likely.

Meanwhile, the steel companies are rationalizing their operations. For example, they are trying to economize on the consumption of fuel and resources, improve the composition ratios of their products, reduce the size of their work force by cutting back on the hiring of new employees, check investments in new facilities, and lighten their financial burden through repayment of loans.

The foregoing efforts have paid off, and the steel companies' sales and earnings have shown a rapid recovery. According to the interim settlement of accounts in September 1979, the five major steelmakers—Japan Steel Corporation, Nippon Kokan K.K., Sumitomo Heavy Industries Co., Kawasaki Steel Corp., and Kobe Steel — registered sales of ¥3,570,000 million and current earnings of ¥241,600 million. Both sales and earnings were the highest semi-annual accounting figures ever recorded.

With the interim September accounting as the peak, however, corporate sales and earnings have shown signs of worsening during the latter half of this fiscal year. This is due to the increase in the prices of oil, molybedenum (a non-ferrous metal) and subsidiary materials, the higher interest burden stemming from the hike in the discount rate, and the rise in import costs of iron ore and coking

According to Eishiro Sato, president of Japan Steel Corporation, the cost increase will range from 7-8%, and so he claims that a hike in steel prices is necessary. He has made it clear that they will be raised around April.

Another problem is that imports of steel materials have been rising sharply, from 211,052 tons in fiscal 1977 to 718,858 tons in fiscal 1978. In the first half of fiscal 1979 alone, they amount to 765,174 tons, already exceeding the volume of the preceding fiscal year. Most of the products consist of plates and steel ingots, including semi-finished items. Exporting countries are chiefly the industrially developing countries such as Taiwan and South Korea. Despite the increased

volume, the ratio of imports to the entire volume of consumption is still low, but the steel companies are concerned since the recent pace of increase is swift.

Many Overseas Project

Japanese steelmakers, however, are cooperating positively with the less developed nations in establishing new steel mills and expanding those already in operation. This is because they consider such cooperation a natural obligation for Japan which is industrially advanced, and they also regard it as a major part of their business strategy in view of the fact that all major steelmakers are seeking to expand their engineering operations.

Specific projects include the follow-

ing

Overall cooperation by Japan Steel Corporation in providing technology, facilities, funds and supervision for the construction of the Paoshan steel mill in Shanghai. It will be an integrated plant with a potential annual output of 6 million tons of blister steel, a project which might be called a symbol of Sino-Japanese cooperation. Target date for start of operation is 1982.

In Brazil, Kawasaki Steel Corp. is extending cooperation in providing funds, technology and facilities for the construction of the Tubaron steel mill, a three-way joint project with Italy and Brazil's national steel corporation. The plant, which is scheduled to go on stream in 1982, will be an integrated mill capable of producing 3 million toons of blister steel annually. Full-scale construction will get under way in early 1980.

There are also many other projects for which cooperation is being requested and which are expected to materialize hereafter. For instance, the Soviet Union has asked Japan to provide wide-ranging help in the construction of a large-scale integrated steel mill in the country's far eastern region with an annual production capacity of 10-15 million tons of blister steel. There are increasingly strong indications of the project materializing.

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The three companies of Nippon Kokan, Kobe Steel and Toyo Menka are proceeding with plans to establish a joint venture with the Egyptian government for construction of a direct conversion steel mill in Egypt with an annual production capacity of 600,000-800,000 tons of blister steel. Plans are to set up the new firm early in 1980 and get the mill operating by 1982.

The Mexican government has asked Japan Steel Corp. to provide assistance in expanding the existing Shikarutua steel mill to boost blister steel output to 280,000 tons annually and to construct a new plate mill with an annual output of 1,500,000 tons.

It has also requested Sumitomo Metal Industries to provide cooperation in the construction of a largediameter steel pipe mill and Kobe Steel for a steel forging plant.

The Australian government is again sceking cooperation from Japanese steelmakers for construction of an integrated steel mill, with an annual output capacity of 10 million tons in

western Australia, a project which once had been put off.

In addition, requests have been received from the Philippines, Thailand and Argentina, and cooperation is taking concrete shape in the form of the planned implementation of feasibility studies.

The reason that the steel companies are eager to cooperate in engineering projects involving the construction of steel mills abroad is that they foresee their annual output increasing by only 34% and, consequently, welcome new projects as a means of expanding and strengthening their operations.

Another important point for steel-makers is whether the hike in raw material prices expected in early 1980 will assure adequate profits. In order to stand up to international cooperation, it will be necessary to modernize and rationalize operations, but for that purpose adequate profits must be assured. The crucial key to the stable growth of the steel companies will be more engineering projects and high prices for steel materials.

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ECONOMIC.

BRIEFS

TRADE DEFICIT--Trade contracts concluded by 13 major Japanese trading firms turned sharply in their disfavor in November with the imbalance reaching 213.5 billion yen, the Japan Foreign Trade Council reported Thursday. The council said that this was due to their trade with the Middle East turning also into a sizable deficit of 167.6 billion yen from substantial excess sales in September and October. Both export and import contracts maintained high levels in the month under view and the trade gap came although the import growth was inclined to stagnate, the report said. Exports totaled 876 billion yen, up 27.8 percent over the previous year, and imports 1,089.5 billion yen, ahead 72.8 percent. In spite of large drop in plant exports, the export volume was increasing and fuel imports, with the largest share of 39.3percent, are still soaring, due to imports of spot crude oil. In the export sector, metals rose 39.8 percent with steels posting the largest gain of 97.6 percent as a result of prices and volume rising by 30.7 percent and 45 percent. Machinery increased 12.2 percent. Ships rose 11 percent with continued brisk sales to Africa. Chemicals and textiles increased 68.9 percent and 20.3 percent, but foodstuffs were ahead only 4.2 percent. In the import sector, fuels increased 2.7 times as a result of increases in prices and volume. [OWO10104 Tokyo MAINICHI DAILY NEWS in English 28 Dec 79 p 5 OW]

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SCIENCE AND TECHNOLOGY

SOLAR-HYDROGEN HEATING, COOLING PROJECT TO START

Tokyo NIKKEI SANGYO SHIMBUN in Japanese 22 Nov 79 p 16

[Excerpts] The New Technology Development Corporation (President Takeyasu Yoshimitsu) on 21 November announced that it had commissioned the Sekisu Chemical Co, Ltd to develop a totally new cooling and heating system which makes use of chemical reactions of metals and hydrogen, setting forward the research and development for the practical use of the system. This system was devised by Assistant Professor Seijiro Suda and other members of the Engineering Department, Kogakuin University. The objective is to establish a private home cooling and heating system which utilizes solar heat, etc by manufacture of a heat pump operated by a low temperature heat source that takes advantage of the characteristics of metal hydrides. In general, it is hoped that it may be a considerably cheaper system than conventional cooling and heating systems when running costs are taken into consideration, because of the long service life of the equipment. The corporation intends to provide 200 million yen to the Sekisui Chemical Co Ltd, hoping to commercialize the system within a 3-year program.

Certain kind of metals such as titanium, manganese and their alloys react with hydrogen and produce metal hydrides. During this process, the following reactions take place: the metals generate heat when hydroginating and absorb heat when decomposing. These reactions are influenced by temperature and pressure and hydrogen gas is characteristically released from metal hydrides when heated.

The system designed by Assistant Professor Suda et al utilizes the characteristics of metal hydrides such as described above. It is so contrived that heating is accomplished by an exothermic reaction and cooling by an endothermic reaction, with the hydrogen tossed back and forth between two kinds of metal hydrides.

Practically speaking, the system consists of two kinds of metals with different characteristics $\rm M_1$ and $\rm M_2$, respective cylinders (heat pumps) $\rm V_1$ and $\rm V_2$ each containing hydrogen, solar heat collectors which are the source of

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the heat, a room fan coil unit and an outdoor radiator. First, a metal hydride previously reacted with hydrogen is decomposed in V_1 , which initiates an endothermic phenomenon. This cool heat is transferred into rooms by means of a fan for cooling. The hydrogen gas generated by the decomposition is led into V_2 and allowed to react with M_2 to form a metal hydride. The heat generated during this process is vented outdoors via a radiator. Next, the metal hydride in V_2 is decomposed by heat from the hot water of the solar heart collectors and the hydrogen gas generated is led into V_1 , which produces a metal hydride of M_1 in the initial condition. Be repeating these processes, cooling is provided.

Heating can be accomplished similarly as in cooling if the exothermic phenomenon which manifests when M_2 reacts with hydrogen is utilized.

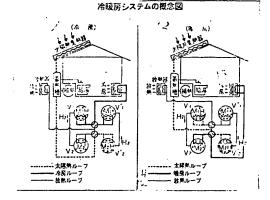
The currently available cooling systems which use solar heart require heating water up to approximately 100°C by solar heat, whereas the new system accomplishes cooling if the water is heated only up to 70°C. Because of this feature, it is expected that a low temperature heart source such as a low temperature waste heart from factories may also become effectively useable.

The New Technology Development Corporation has not calculated in concrete terms the price of the commercial system. However, the maintenance and operational expenses will be low since there are few mechanically moving parts. This lowers the cost of the system as a whole to less than that for existing solar houses, although the installation cost of this system is assumed to be considerable higher.

Drawing: General Drawing of the Cooling and Heating System

Key:

- 1. cooling
- heating
- 3. solar heat collector
- 4. radiator
- 5. radiation
- 6. heat accumulator
- 7. supplemental heating
- 8. hot water supply
- 9. cooling
- 10. solar heat loop
- 11. cooling loop
- 12. radiation loop
- 13. heating
- 14. heating loop



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SCIENCE AND TECHNOLOGY

FRANCE OFFERS EXCHANGE ON OCEAN OBSERVATION EQUIPMENT

Tokyo NIKKEI SANGYO SHIMBUN in Japanese 22 Nov 79 p 16

[Text] The National Ocean Development Center of France (CNEXO) has lately asked the Science and Technology Agency for an exchange of information pertaining to the development and utilization of ocean observation equipment. Although in the past France and Japan have had a history of conducting joint research on the development of diving technology, etc, this is the first time that they have requested an exchange extending to the field of observation equipment. The authorities concerned regard this request for an exchange as a manifestation of a great French interest in the rapidly improving Japanese ocean development.

The following four themes are proposed for the exchange of information: an ocean pollution analyzer which uses ion exchange resins, an undersea drifting buoy for measuring swirls of the sea by remote sensing from a satellite, a wave-measuring buoy and an ultrasonic system to measure positions of deep submergenic equipment. Among those, France has almost completed the development of the undersea drifting buoy and the wave measuring buoy, but for the remaining two themes they are seeking a technical exchange aspiring to introduce technology from Japan.

The Science and Technology Agency, which accepted the French proposal, has actively started to study the matter. For example, the agency considered it significant to absorb the technology for undersea drifting buoys which collect stable data of the swirls in the sea, since the current state of scientific progress in Japan only facilitiates the measuring of the swirls on the surface of the sea, although undersea swirls are an important point for projecting the drifting of the currents. Also, the agency regards the technical exchange useful for the improvement of the technical standards of both countries, considering that there are some subtle procedural differences between France and Japan, although the principles may be the same.

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With this in mind, the Science and Technology Agency will decide on research institutes to be assigned the respective themes as soon as possible, and will speed up completing specific exchange methods.

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SCIENCE AND TECHNOLOGY

FUEL CELL POWER STORAGE 11-YEAR PROJECT TO START

Tokyo NIKKAN KOGYO SHIMBUN in Japanese 23 Nov 79 p 4

[Text] Research and development of a power storage system by means of a secondary cell has emerged. The Agency of Industrial Science and Technology (director, Seiichi Ishizaka) will embark on an ll-year plan for the development of a new cell power storage system, investing a total sum of approximately 17 billion yen, starting from the next fiscal year. Meanwhile, the Electrical Society organized a committee which specializes in power storage cell systems (chairman, Hiroshi Uenosono, also an assistant director of the Power Technology Research Institute of the Central Research Institute of Electric Power Industry) to start an investigation of the cell characteristics conducted by the entirety of the public and the private entities, including electric power companies and cell makers. Also, the electric power industry recently indicates its increasing interest in storing power by means of secondary cells, which is demonstrated by the Tokyo Electric Power Company, which has started full-scale research activity on this matter at the Technical Development Research Institute. On the other hand, the U.S.A. is also extremely eager to develop this secondary cell and plans to complete a Battery Electricity Storage Test (BEST) facility in the next year to test and evaluate a large-scale power storage cell created for load leveling. Under the current situation, Japan is behind the U.S.A. in this race, but on the other side of the coin, it is expected that Japan will rank with the U.S.A. and rapidly advance in the development of a new cell storage system, since after all Japan has a reputation of having the world's top level electric technology as far as system technology is concerned, as exemplified by the inverter.

Electric power is an energy difficult to store, and simultaneous supply and demand is characteristically said to be required. Therefore, the power generation facility is constructed to accommodate the needs on the basis of the peak of the demand. However, this practice creates waste in capacity during nonpeak hours. Presently, there is a pumping-up power generation which is counted as one of the practices which use the power effectively during the nonpeak hours. However, it is said that all the large-scale sites where the pumping-up power generation is operable have been already

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developed to the full extent, and it is very difficult to seek a new building site under the present circumstances. Additionally, the acquisition of the land required for the construction of transmission lines is difficult, and the transmission loss is also a problem. It is urgent therefore to develop a new power storage technology to prepare for the power demand.

As a new power storage method to meet this need, there are flywheels, compressed air, a super conductive coil, a condenser and hydrogen. However, for the time being, a power storage system by means of a battery is considered the method to give practical effect to the idea in lieu of a pumping-up power generation. Particularly, in the past, large capacity batteries for lead leveling have not been in practical service although small ones for emergency power sources are utilized. Yet, the potential practical use of a large capacity power storage system is said to be ever increasing in recent years because of the advancement of the technological development such as an inverter realized with the progress of the development of batteries which work under a new system.

Cells utilize the electric energy which is generated when a metal vulnerable to ionization is dipped in the electrolyte. Among them, the one which can repeat the cycle of recharging after the charged and stored energy is discharged and spent is called a secondary cell.

The most popularly used secondary cells are, at present, lead cells. Lead cells are said to have been technologically completed, and there is only a little room left for improving the energy density on the basis of weight. Specifically, the theoretical energy density of the lead cell is 167 whr/kg, for practical use, 30-40 whr/kg level. Due to this disadvantage, studies for the development of new cells having a high energy density are vigorously pursued using various combinations of materials.

According to a review of the research project for the new cell power storage system started by the Agency of Industrial Science and Technology, they are planning to develop new cells using sodium-sulfur, zinc-halogen and redox as experimental subjects, and will select the most suitable type for a power storage cell among these trial models sometime by the end of fiscal year 1986.

A sodium-sulfur cell is the term designated for a cell which uses dissolved metal sodium for the cathode and dissolved sulfur for the anode, and its theoretical energy density is 760 whr/kg, for practical use, 150-200 whr/kg. On the other hand, a zinc-halogen cell is the term designated to a cell which uses zinc for the cathode and chlorine or bromine for the anode, and the plates of the cell are made of inactive base material, such as graphite, to which the said materials are adsorbed. A theoretical energy density of 834 whr/kg is said to be developable.

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Redox cells are the ones being researched and developed by the General Electronic Technology Research Institute of the AITS starting from fiscal 1975. It is a secondary cell which works under the system where an aqueous solution of chemicals (redox system) different in oxidation condition is fed into a flow type electrolytic cell by a pump to charge and discharge electricity.

These three types of the technological development to be pursued concerning the new cells. In parallel to this pursuit, system technologies such as methods to connect to the electric system, cell connection structure, operation and maintenance control within the electric system and inverter (AC-DC exchanger) will be developed so that systematized electric power storage will be established by fiscal 1985 or so. For the development of this system technology, it is planned to set forth the research for practical use using a lead cell as a sample. Although this cell is said to have been technologically perfected, the system technology will be developed without lagging behind the new cells by using the lead cell for the time being, since this cell appears to be the shortest distance to a practical use power storage cell. Additionally, the agency intends to explore the possibility of improving the lead cell itself.

By fiscal 1986, the interim technology evaluation of a total power storage system that combines the said new cells and the system technology will be made, and the demonstration tests will be operated aiming to bring the system into practical use by fiscal 1990.

The practical system will be a 20,000 kwhr (20 megawatt) class, and the AITS considers this capacity to be a "scale which can meet the power needs of approximately 20,000 general households," and it is highly promising as a community energy supply system starting from the latter half of the 1980's.

Meanwhile, looking at the state of the technological development in various countries across the seas, research is in progress in the U.S.A., West Germany, Switzerland, etc. Especially in the U.S.A., where suitable sites for the construction of large-scale pumping-up power generation facilities are scarce due to the aspects of geographical features and the environmental protection, large-scale research and development projects are programmed at a federal level.

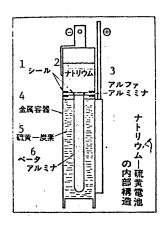
Presently in the U.S.A., more than 10 research agencies are conducting technological development pertaining to the various batteries such as lead cells, to begin with, sodium-sulfur, and zinc-chlorine. The "BEST project," which stands out as the core of these research activities, was planned jointly by the Electric Power Research Institute (EPRI) of the Department of Energy (DOE), started in 1974, and the power companies. This plan is a technological development plan relating to a power storage method which sustains the same function (load leveling) as the pumping-up power generation that is said to supply excess power stored during off-peak

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peak hours, by installing a large-capacity battery. The test facility for the project is already under construction, and it is scheduled to be completed in the next fiscal year.

Construction of this facility is in the hands of the Public Service Electric & Gas Co of the U.S.A. which provides power and natural gas, and the total building area is approximately $2600m^2$ consisting of 3 battery test rooms, a data collection room, a DC bus ventilator, an inverter, a control room, etc. Especially, all three battery test rooms are constructed to house a battery of 2.5 megawatts, 20 megawatt/hr and a maximum 1000v rating. The project is double staged, the development of lead cells serviceable in short-term and the development and demonstration of new cell system serviceable in the latter half of the 80's.

A. Internal Structure of Sodium-Sulfur Cell



Key: 1. seal

2. sodium

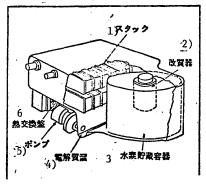
3. alpha alumina

4. metal vessel

5. sulfur-carbon

6. beta alumina

B. General Diagram of Zinc-Hydrogen Chloride Cell



Key: 1. stack

2. reformer

3. hydrogen storage vessel

4. electrolyte sink

5. pump

6. heat exchange plate

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SCIENCE AND TECHNOLOGY

JDA, FUJI ELECTRIC DEVELOP CALCIUM HYDRIDE-AIR FUEL CELL

Tokyo NIHON KOGYO SHIMBUN in Japanese 27 Nov 79 p 16

[Text] Research on the utilization of metal hydrides is being popularly conducted by various strata of society. Now, the Electric Machine & Equipment Laboratory (chief, Tatsushi Sugimoto) of the First Laboratory, and the Technical Research & Development Institute (director, Kazumasa Kimura) of the Defense Agency have developed jointly with the Central Research Institute of the Fuji Electric Co, Ltd (president, Fukushige Shishido), a metal hydride-air fuel cell using calcium hydride, which is one type of metal hydrides as a source of hydrogen. According to this invention, a cell is structured to use hydrogen obtained from the hydrolysis of calcium hydride and airborne oxygen as "fuels." Studies on metal hydride-air fuel cells such as this type are not well known, and may have been conducted so far only by the U.S. Army. It seems this case was the very first attempt in our country. The experimental device's rated output is 240 watts, which is still not very much. However, after successfully acquiring the anticipated performance, they are planning the challenge of making a 1-kilowatt device in the next fiscal year. Sugimoto and his group are thinking of using the cell first as a power source for mobil communicating machines to replace the conventional direct current engine generators. The future progress of this cell is very promising because of its potential use to store, for instance, excess power during the night time.

The most abundant subterranean resource of our country is calcium carbonate. The metal calcium obtained from this calcium carbonate transforms to calcium hydride when heated to 200-300°C under a hydrogen atmosphere. This calcium hydride characteristically releases hydrogen readily and becomes calcium hydroxide (slaked lime) when it contacts with water.

The new fuel cell developed at this time stores hydrogen, which serves as a fuel in the form of calcium hydride, and electricity is obtained whenever required by feeding the electric cell the hydrogen generated from the reaction induced by adding water to this compound.

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The device consists of a hydrogen generator component and an electric cell, and its structure appears as illustrated in the diagram. To be concrete, pressurized water is allowed to flow out from the bottom of the reactor filled with calcium hydride granules of soybean size to induce the reaction of calcium hydride with water. Since this reaction is exothermic, water immediately transforms into steam. When the reaction of the calcium hydride with the generated steam advances, a 100 percent hydrogen which absolutely contains no steam comes out from the top of the reactor.

Hydrogen pressure can be controlled to a constant pressure by figuring the proper amount of the water to be fed. However, hydrogen pressure is further regulated by a pressure governor before the hydrogen is led into the electric cell.

The electric cell is constructed by multiple stacks of single cells which are designed to hold electrolyte between both positive and negative porous electrode plates (the cathode is made of nickel and the anode is made of carbon) and to feed hydrogen and air from both sides. The experimental 240-watt model has 20 stacks of single cells. In the cell, water is produced along with the generation of electricity, and theoretically, the electrolyte gradually thins unless this water is withdrawn. However, according to a clever balancing configuration, it is so designed that the water is transformed to steam by heat, and the steam escapes into the air which is fed through the porous electrodes.

Sugimoto and his group have constructed two types of 240-watt trial models, an alkali type which uses a 30 percent caustic potash solution as an electrolyte and an acid type which uses 100 percent phosphoric acid as an electrolyte (dimensions: 60cm x 40cm; weight: the former—approximately 60kg, the latter—approximately 52kg) to conduct a performance test. They reported that the actual output reached by the alkali type was 290 watts in output and 0.7 volts in single electric cell voltage, and by the acid type was 141 watts in same and 0.6 volts in same, and that the electricity was generated for approximately 2.5 hours when 500 g of calcium hydride was used. Up to date, they have operated the cells for a total of 400 hours.

Because of these results, Sugimoto and his group consider the invention satisfactory and practical, and expressed their desire to nurture the device for use as an outdoor power source along with the hydrazine-air fuel electric cell (a 3kw model has already been completed) which is being developed in parallel to this fuel cell.

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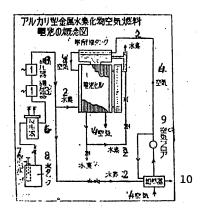


Diagram: General Diagram of Alkali Type Metal Hydride-Air Fuel Cell

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Key:	⊥.	electrolyte tank	0.	reactor
	2.	hydrogen	7.	air pump
	3.	pressure governor	8.	water tank
	4.	air	9.	air blower
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